Infringement Claim Chart for U.S. Pat. No US9261365B2 Vs Valve Corporation ("Defendant)

Claim 1 **Evidence** 1. A method for Defendant (Valve Corporation) provides a product Vive (or HTC Vive) featuring SteamVR tracking which is a hardware/software solution that lets the devices (positional information device) know in receiving location information at a real-time where they are within a room (location information) using multiple sensors. positional information **VIVE Cosmos Elite** device, the method comprising: VIVE Cosmos Elite features SteamVR™ Tracking which enables 360-degree, sub-millimeter accuracy. Go easily between reality and virtual reality with a flip-up halo design. VIVE Cosmos Elite also features maximum fidelity and an ergonomic fit, ideal for 6 Apr, 2016 Source: https://store.steampowered.com/app/358040/VIVE Cosmos Elite/



From prototype in late 2014 to consumer delivery in early 2016, the HTC Vive is the world's leading virtual reality experience. Built on top of the SteamVR tracking technology, the HTC Vive provides a unique, Room-Scale, 360° VR experience, used by hundreds of developers and hundreds of thousands of gamers world-wide to experience the latest VR games. The SteamVR Tracking component of the HTC Vive has been updated frequently with new features, optimizations, and bug fixes. Throughout the product launch and through innumerable game application updates, it has continued to provide the world's best VR experience.



Source: https://partner.steamgames.com/vrlicensing

ABOUT THIS HARDWARE

VIVE Cosmos Elite is built for precision gaming. It comes paired with the VIVE Cosmos External Tracking Faceplate, which enables 360-degree, sub-millimeter SteamVR™ Tracking accuracy. The system provides the flexibility of modular faceplate technology for future VR and AR solutions.

Source: https://store.steampowered.com/app/358040/VIVE Cosmos Elite/

SteamVR Tracking has three main components: SENSORS ON TRACKED OBJECTS HOST BASE STATION Lightweight, low power, low cost ASIC sensors Integrates 3D positional information from multiple devices. For now, this means a PC. 120* multi-axis laser emitter Aside from power, fully self-contained - no cable connection to the host or tracked objects Up to 32 sensors per object for full 360* SteamVR API for accurate timing, synchronization, and prediction 2 base-stations can be used for 360* · Software toolkit to calculate optimal sensor Compatibility with Steam and access to the full SteamVR catalog Built-in 1000Hz IMU for low latency, high resolution tracking Wireless communication with host for cable-free peripherials Source: https://partner.steamgames.com/vrlicensing SteamVR[™] Tracking Whether you're building a VR golf club or an indoor quad-copter, 3D tracking is the heart of your product. Developed in-house at Valve, SteamVR Tracking is a hardware/software solution that lets your devices know in real time where they are, within a room. Valve is now making SteamVR Tracking fully available to other companies, without licensing fees. Source: https://partner.steamgames.com/vrlicensing

How It Works

The SteamVR Tracking Basestations sweep the room with multiple sync pulses and laser lines, reaching out to about 5 meters. By keeping careful track of the timings between pulses and sweeps, the SteamVR Tracking system uses simple trigonometry to find the location of each sensor to within a fraction of a millimeter. By combining multiple sensors, 2 basestations, as well as adding a high speed IMU (inertial measurement unit), SteamVR also calculates the tracked object's orientation, velocity, and angular velocity, all at an update rate of 1000Hz.

a)sending a request from a requesting positional information device to a server for at least one address stored in at least one sendina positional information device, the request including a first identifier of the requesting positional information device:

Sending request to show real time location (i.e., at least one address stored) of user within a space includes first identifier (user login ID and password of Steam) of the requesting positional information device (e.g., PC) to the Steam server for transmitting the location of the user.

SteamVR[™] Tracking

Whether you're building a VR golf club or an indoor quad-copter, 3D tracking is the heart of your product. Developed in-house at Valve, SteamVR Tracking is a hardware/software solution that lets your devices know in real time where they are, within a room. Valve is now making SteamVR Tracking fully available to other companies, without licensing fees.

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HOST

- Integrates 3D positional information from multiple devices. For now, this means a PC.
- SteamVR API for accurate timing, synchronization, and prediction
- Compatibility with Steam and access to the full SteamVR catalog

How It Works

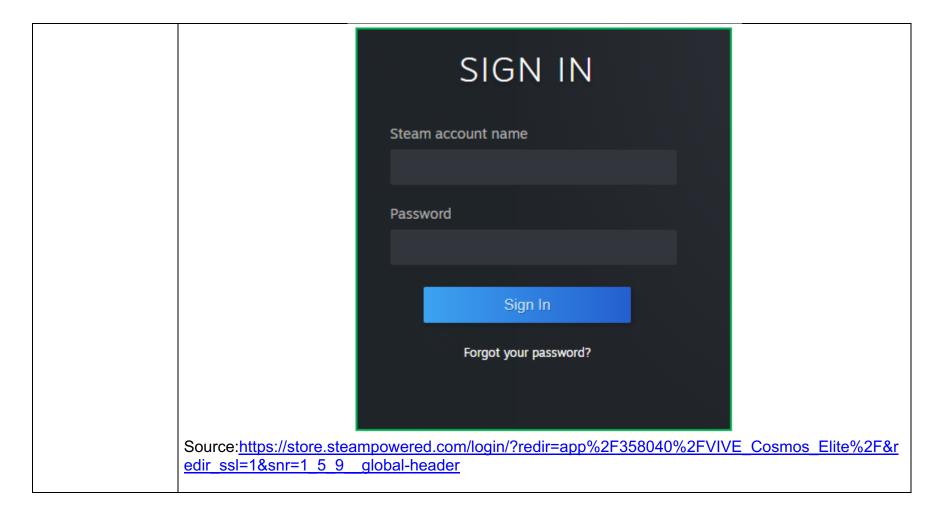
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b)receiving at the requesting positional information device, from the server, a retrieved at least one address to the requesting positional information device

The Steam server transmits the position of the user (i.e. at least one address) to the requesting positional information device (e.g., PC.).

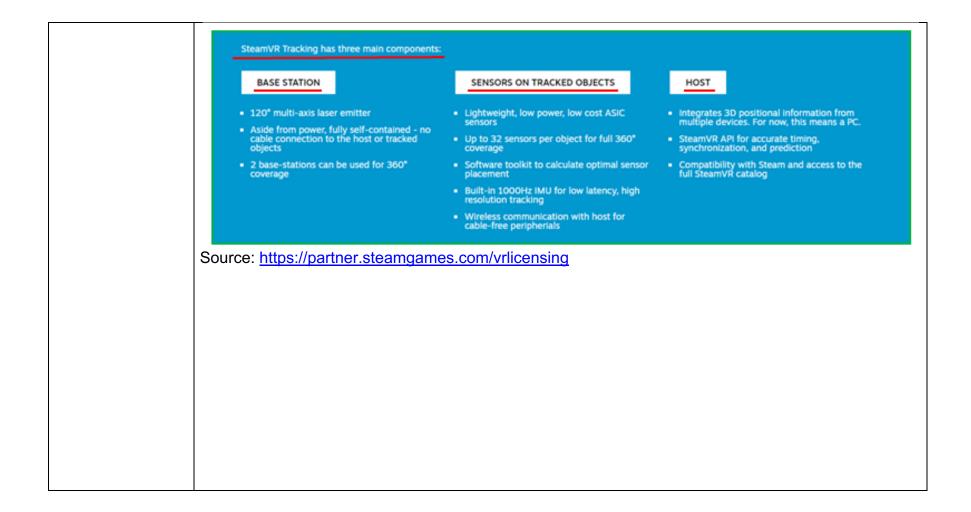
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HOST

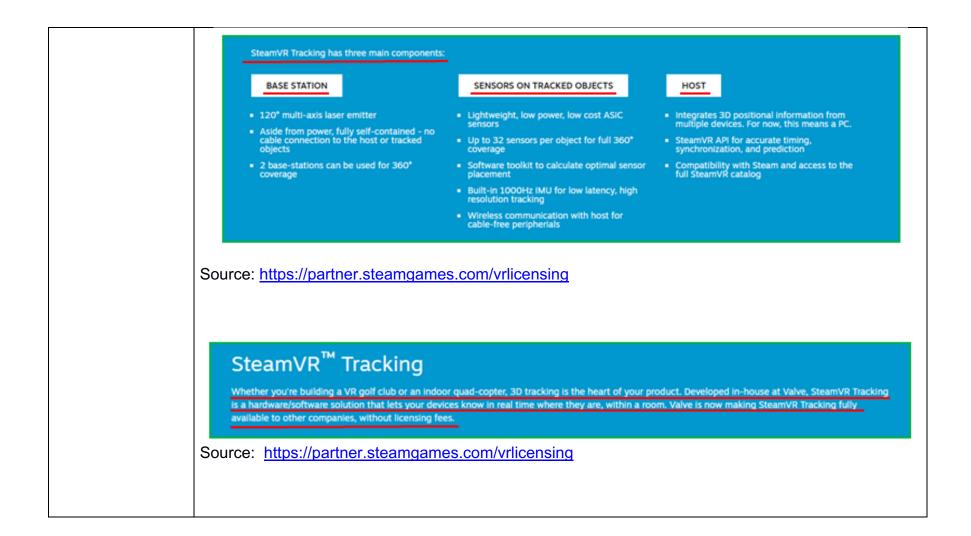
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- SteamVR API for accurate timing, synchronization, and prediction
- Compatibility with Steam and access to the full SteamVR catalog



c) wherein the server determines a second identifier for identifying the at least one sending positional information device based on the received first identifier and retrieves the requested at least one address stored in the identified at least one sending positional information device.

The SteamVR tracking component of HTC Vive (requesting positional information device) requests (from the server) for the user's location (i.e., at least one address stored), before activating the multiple sensors (i.e., second identifier) needs to be added to the user's account identified by the user login ID and password (i.e., the first identifier). Hence, the multiple sensors (i.e., second identifier) is mapped to the user's login ID (i.e., the first identifier) for tracking the real-time location (i.e., at least one address stored) of user.





How It Works

The SteamVR Tracking Basestations sweep the room with multiple sync pulses and laser lines, reaching out to about 5 meters. By keeping careful track of the timings between pulses and sweeps, the SteamVR Tracking system uses simple trigonometry to find the location of each sensor to within a fraction of a millimeter. By combining multiple sensors, 2 basestations, as well as adding a high speed IMU (inertial measurement unit), SteamVR also calculates the tracked object's orientation, velocity, and angular velocity, all at an update rate of 1000Hz.

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